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EXAMINER	
DEICHMEISTER, NICHOLAS F	
ART UNIT	**PAPER NUMBER**
2616	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/774,570	HARLEY, JOSEPH L.	
	Examiner	Art Unit	
	Nick Deichmeister	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 February 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-28* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *09 February 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *5/16/2005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. **Claims ~~1, 8, 15 and 22~~ 1-28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.**

Claim 1 recites the limitation "the control station host application computer program" in lines 17-18. There is insufficient antecedent basis for this limitation in the claim.

Claim 1 recites the limitation "the communication protocol of the remote device" in line 29. There is insufficient antecedent basis for this limitation in the claim.

Claim 1 recites the limitation "the communication network" in line 37. There is insufficient antecedent basis for this limitation in the claim.

Claim 8 recites the limitation "the control station signals" in line 1. There is insufficient antecedent basis for this limitation in the claim.

Claim 8 recites the limitation "remote device signals" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 15 recites the limitation "the communication protocol of the remote device" in line 35. There is insufficient antecedent basis for this limitation in the claim.

Claim 15 recites the limitation "the communication network" once each in lines 38 and 40. There is insufficient antecedent basis for this limitation in the claim.

Claim 22 recites the limitation "the control station signals" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim 22 recites the limitation "remote device signals" in line 2. There is insufficient antecedent basis for this limitation in the claim.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

1-20 D.Z.

Claims ~~1, 4-6, 15 and 18-19~~ are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Functional descriptive material such as computer programs must be recorded on some computer-readable medium in order to become structurally and functionally interrelated to the medium and be considered statutory. See MPEP 2106.01. Specifically,

a. Claim 1 recites "instructions for..." The examiner suggests replacement language such as (among others) "instructions, stored a computer-readable medium, for..."

b. Claims 4-5 and 18-19 recite "client computer program." See MPEP 2106.01.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 6, 10, 11-15, 20, and 24-27 are rejected under 35 U.S.C. 102(b) as being anticipated by Klotzbach et al (U.S. Patent No. 5,410,754).

Klotzbach et al discloses a bi-directional wire-line to local area network interface and method, comprising the following features:

Regarding claim 1, an apparatus (fig. 1, wire-line carrier to local area network interface; col. 3, lines 42-43) for facilitating (col. 1, lines 12-15, interface between a telecommunications medium and a local-area network) communications (col. 1, lines 12-15, interface between a telecommunications medium and a local-area network) between a processor at a legacy control station (fig. 2B, remote host 17) and a legacy remote device (fig. 1, T-carrier interface) over a communication network (fig. 2B, local area network 10), comprising: a) a set of instructions executable by the processor (col. 7, line 39, functionality of each component), comprising: i) instructions for communicating data (fig. 2B, line between remote host 17 and local area network 10) from the control station to the remote device (fig. 1, connections among local area network 10, MAC 11, stack 12, protocol converter 13, controller 14 and T-carrier interface 15), comprising: 1) a first transmission portion (fig. 1, T-carrier interface 15) adapted to accept signals (fig. 1, connection between wire-line interface 16 and T-

carrier interface 15) from a preexisting host application computer program (fig. 1, connection controller 14) in a predetermined format (col. 6, lines 31-32, PCM signal received on the wire-line carrier system), 2) a second transmission portion (fig. 1, protocol converter 13; col. 6, lines 17-22, protocol converter) adapted to convert the formatted host application computer program signals (col. 6, line 20, binary information) into a packet-switched format (col. 6, lines 20-22, converts binary information to packetized LAN data) for transmission to the remote device (fig. 1, connections among protocol converter 13, protocol stack 12, LAN MAC 11 and LAN 10; fig. 2B, remote host 17 connected to LAN 10) by means of a network (fig. 1, LAN 10), and 3) a third transmission portion (fig. 1, connection controller 14) adapted to generate commands (col. 6, lines 44-45, communications parameters are negotiated) to satisfy at least one host application computer program handshaking protocol (col. 6, lines 40-42, provides call origination and termination control); and ii) instructions for receiving data (fig. 1, LAN TCP/IP protocol stack 12) from the remote device (fig. 1, connection between LAN TCP/IP protocol stack 12 and LAN 10; fig. 2B, remote host 17 connected to LAN 10), comprising: 1) a first receiving portion (LAN TCP/IP protocol stack 12) adapted to accept packet-switched data from the network (LAN TCP/IP protocol stack 12), 2) a second receiving portion (fig. 1, protocol converter 13; col. 6, lines 17-22, protocol converter) adapted to convert the packet-switched data (col. 6, lines 17-18, converts packetized information) into a predetermined format (col. 6, lines 18-20, in the form of Telnet data to binary information) corresponding to the pre-existing communication protocol (col. 6, line 20, binary information) of the control station host application

computer program (col. 6, line 20, binary information), and 3) a third receiving portion (fig. 1, connection controller 14) adapted to generate commands (col. 6, lines 44-45, communications parameters are negotiated) to satisfy at least one host application computer program handshaking protocol (col. 6, lines 40-42, provides call origination and termination control); and b) a hardware interface component (fig. 1, wire-line to local area network interface) located in proximity to the remote device (fig. 1, T-carrier interface 14 connected to wire-line interface 16), comprising: i) a transceiver portion (fig. 1, LAN MAC 11) electrically coupled to the network (fig. 1, LAN MAC 11 connected to LAN 10) and adapted to: 1) accept packet-switched signals from the network (fig. 1, LAN MAC 11 connected to LAN 10), and 2) send packet-switched signals to the network (fig. 1, LAN MAC 11 connected to LAN 10); ii) a remote processor (fig. 1, protocol converter 13) electrically coupled intermediate [sic] (fig. 1, interconnections between protocol converter 13, stack 12, and LAN MAC 11) to the transceiver portion and the remote device (fig. 1, interconnections between protocol converter 13, stack 12, and LAN MAC 11), the remote processor being adapted to: 1) convert packet-switched signals (col. 6, lines 17-18, converts packetized information) received from the transceiver (fig. 1, interconnections between protocol converter 13, stack 12, and LAN MAC 11) to a predetermined format corresponding to the communication protocol of the remote device (col. 6, lines 18-20, in the form of Telnet data to binary information), and 2) convert formatted signals corresponding to the communication protocol of the data received from the remote device (col. 6, line 20, binary information) to packet-switched data (col. 6, lines 20-22, converts binary information to packetized LAN data); and iii) a

bidirectional data interface (fig. 1, bidirectional interface between LAN 10 and LAN MAC 11) electrically coupled to the remote device (fig. 1, bidirectional interface between LAN 10 and LAN MAC 11) and the remote processor (fig. 1, bidirectional interface between LAN 10 and LAN MAC 11) to communicate signals from the remote device to the remote processor (fig. 1, bidirectional interface between LAN 10 and LAN MAC 11) and to communicate signals from the remote processor to the remote device (fig. 1, bidirectional interface between LAN 10 and LAN MAC 11), wherein the set of instructions and hardware interface component cooperate to facilitate communication (col. 2, lines 11-15, bi-directional wire-line to local area network interface supporting a known local area network protocol stack from media access control layer up to and including the session layer) between a legacy remote device (fig. 1, wire-line interface 16) and a corresponding legacy host application computer program (fig. 2B, remote host 17) by means of the communication network (fig. 2B, LAN 10).

Regarding claim 6, wherein the remote processor further comprises embedded instructions (fig. 2A, data de-packetizer 43, session number correlator 42, command packet recognizer 41, status packet generator 44, session number correlator 45, data packetizer 40) that are executable by the remote processor (col. 6, lines 17-23, protocol converter 13 converts).

Regarding claim 10, wherein the processor is a computer (col. 1, lines 17-18, remote host computers).

Regarding claims 11 and 25, wherein only the hardware (col. 5, lines 42-46, the upper layer of the LAN TCP/IP stack creates and maintains the notion of discrete ports)

initiates communication between the remote device and the control station. The examiner notes that the LAN TCP/IP stack is contained within the wire-line carrier to local area network interface (fig. 1).

Regarding claim 12, wherein the hardware interface is adapted to initiate communication with the control station (col. 6, lines 40-43, call origination and termination) in accordance with dialing commands (col. 6, lines 43-45, modem standard is determined and communications parameters are negotiated).

Regarding claim 13, wherein the remote processor comprises a microprocessor (col. 3, line 65, digital signal processor).

Regarding claim 14, wherein the first transmission portion accepts control (col. 6, lines 23-24, modem control commands) and data signals (fig. 1, connection between wire-line interface 16 and T-carrier interface 15) from a preexisting host application computer program (fig. 1, connection controller 14) in a predetermined format (col. 6, lines 31-32, PCM signal received on the wire-line carrier system).

Regarding claim 15, a method (fig. 1, wire-line carrier to local area network interface; col. 3, lines 42-43) for facilitating (col. 1, lines 12-15, interface between a telecommunications medium and a local-area network) communications (col. 1, lines 12-15, interface between a telecommunications medium and a local-area network) between a legacy control station (fig. 2B, remote host 17) and a legacy remote device (fig. 1, T-carrier interface) over a communication network (fig. 2B, local area network 10), comprising the steps of: a) providing instructions executable by a processor at the control station (col. 7, line 39, functionality of each component); b) providing a hardware

interface component (fig. 1, wire-line to local area network interface) in proximity to and in electrical communication with the remote device (fig. 1, T-carrier interface 14 connected to wire-line interface 16); c) facilitating (fig. 1, T-carrier interface 14 connected to wire-line interface 16), within the control station (fig. 1, T-carrier interface 14 connected to wire-line interface 16), communications from the control station to the remote device (fig. 1, T-carrier interface 14 connected to wire-line interface 16) by: i) accepting signals (fig. 1, connection between wire-line interface 16 and T-carrier interface 15) from a preexisting host application computer program (fig. 1, connection controller 14), ii) converting (col. 6, line 20, binary information) the host application computer program signals from a predetermined format into a packet-switched format (col. 6, lines 20-22, converts binary information to packetized LAN data) for transmission to the remote device (fig. 1, connections among protocol converter 13, protocol stack 12, LAN MAC 11 and LAN 10; fig. 2B, remote host 17 connected to LAN 10) by means of the communication network (fig. 1, LAN 10), and 3), iii) generating handshaking commands (col. 6, lines 44-45, communications parameters are negotiated) to satisfy at least one host application computer program handshaking protocol (col. 6, lines 40-42, provides call origination and termination control), and iv) communicating the handshaking commands to the host application computer program (fig. 1, connections among protocol converter 13, protocol stack 12, LAN MAC 11 and LAN 10; fig. 2B, remote host 17 connected to LAN 10); d) facilitating, within the control station (fig. 1, connections among protocol converter 13, protocol stack 12, LAN MAC 11 and LAN 10; fig. 2B, remote host 17 connected to LAN 10), communications from the

remote device to the control station (fig. 1, connections among protocol converter 13, protocol stack 12, LAN MAC 11 and LAN 10; fig. 2B, remote host 17 connected to LAN 10) by: i) accepting packet-switched data from the network (LAN TCP/IP protocol stack 12), ii) converting the packet-switched data (col. 6, lines 17-18, converts packetized information) to a predetermined format (col. 6, lines 18-20, in the form of Telnet data to binary information) corresponding to the communication protocol of the host application computer program (col. 6, line 20, binary information), and iii) generating handshaking commands (col. 6, lines 44-45, communications parameters are negotiated) to satisfy at least one host application computer program handshaking protocol (col. 6, lines 40-42, provides call origination and termination control); and iv) communicating the handshaking commands to the host application computer program (fig. 1, connections among protocol converter 13, protocol stack 12, LAN MAC 11 and LAN 10; fig. 2B, remote host 17 connected to LAN 10); e) facilitating communications (col. 2, lines 11-15, bi-directional wire-line to local area network interface supporting a known local area network protocol stack from media access control layer up to and including the session layer) from the control station (fig. 2B, remote host 17) to the remote device (fig. 1, T-carrier interface) within the hardware interface component (fig. 1, connections among protocol converter 13, protocol stack 12, LAN MAC 11 and LAN 10; fig. 2B, remote host 17 connected to LAN 10) by: i) accepting packet-switched signals from the network (LAN TCP/IP protocol stack 12), and ii) converting the packet-switched data (col. 6, lines 17-18, converts packetized information) to a predetermined format (col. 6, lines 18-20, in the form of Telnet data to binary information) corresponding to the communication

protocol of the remote device (col. 6, line 20, binary information), and iii) communicating (fig. 1, connections among elements 10-16) the converted data to the remote device; f) facilitating communications (col. 2, lines 11-15, bi-directional wire-line to local area network interface supporting a known local area network protocol stack from media access control layer up to and including the session layer) from the remote device (fig. 1, wire-line interface 16) to the control station (fig. 2B, remote host 17) within the hardware interface component (fig. 1, connections among protocol converter 13, protocol stack 12, LAN MAC 11 and LAN 10; fig. 2B, remote host 17 connected to LAN 10) by: i) accepting signals from the remote device (fig. 1, connection between wire-line interface 16 and T-carrier interface 15), the signals having a predetermined format corresponding to the communication protocol of the remote device (col. 6, lines 31-32, PCM signal received on the wire-line carrier system); ii) converting the signals to packet-switched data (col. 6, lines 20-22, converts binary information to packetized LAN data); and iii) communicating the packet-switched data to the control station (fig. 1, connections among protocol converter 13, protocol stack 12, LAN MAC 11 and LAN 10; fig. 2B, remote host 17 connected to LAN 10) by means of the communication network (fig. 1, LAN 10), wherein the legacy control station and the legacy remote device communicate via the communication network (fig. 1, LAN 10).

Regarding claim 20, wherein the steps of converting packet-switched data to a predetermined format and converting the signals to packet switched data within the hardware interface component (col. 6, lines 17-23, protocol converter 13 converts) are accomplished using embedded instructions (fig. 2A, data de-packetizer 43, session

number correlator 42, command packet recognizer 41, status packet generator 44, session number correlator 45, data packetizer 40).

Regarding claim 24, wherein the steps of facilitating, within the control station (col. 1, lines 17-18, remote host computers), communications from the control station to the remote device and the steps of facilitating, within the control station (col. 1, lines 17-18, remote host computers), communications from the remote device to the control station, are performed by a computer (col. 1, lines 17-18, remote host computers).

Regarding claim 26, wherein the remote device initiates communication with the control station (col. 6, lines 40-43, call origination and termination) in accordance with dialing commands (col. 6, lines 43-45, modem standard is determined and communications parameters are negotiated).

Regarding claim 27, wherein the steps of facilitating communications from the control station to the remote device within the hardware interface, and the steps of facilitating communications from the remote device to the control station within the hardware interface, are performed by a microprocessor (col. 3, line 65, digital signal processor).

Regarding claim 28, wherein the signals accepted from the preexisting host application computer program (fig. 1, connection controller 14) are control (col. 6, lines 23-24, modem control commands) and data (fig. 1, connection between wire-line interface 16 and T-carrier interface 15) signals.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. Claims 2 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Klotzbach et al in view of Partridge et al (U.S. Patent No. 6,160,819).

Klotzbach et al describes the claimed limitations as discussed in paragraph 6 above. Klotzbach et al does not disclose the following features:

Regarding claim 2, wherein the commands to satisfy at least one computer program handshaking protocol comprise programmable connection tuning commands comprising dynamic packet sizing commands.

Regarding claim 16, wherein the commands to satisfy at least one computer program handshaking protocol comprise programmable connection tuning commands comprising dynamic packet sizing commands.

Partridge et al discloses a method and apparatus for multiplexing bytes over parallel communications links using data slices, comprising the following features:

Regarding claim 2, wherein the commands to satisfy at least one computer program handshaking protocol comprise programmable connection tuning commands (fig. 3, BBB muxing logic 308) comprising dynamic packet sizing commands (col. 4, lines 50-51, transmit variable size packets).

Regarding claim 16, wherein the commands to satisfy at least one computer program handshaking protocol comprise programmable connection tuning commands (fig. 3, BBB muxing logic 308) comprising dynamic packet sizing commands (col. 4, lines 50-51, transmit variable size packets).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Klotzbach et al by using the features, as taught by Partridge et al, in order to provide an optimal balance between preserving packet order and conserving network resources (Partridge et al, abstract, lines 22-24).

8. Claims 3 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Klotzbach et al in view of Latif et al (U.S. Patent No. 6,393,483 B1).

Klotzbach et al describes the claimed limitations as discussed in paragraph 6 above. Klotzbach et al further discloses the following features:

Regarding claims 3 and 17, at least one computer program handshaking protocol (col. 6, lines 40-42, provides call origination and termination control).

Klotzbach et al does not disclose the following features:

Regarding claim 3, further comprising a graphical user interface for configuring the commands.

Regarding claim 17, the step of using a graphical user interface to configure the commands.

Latif et al discloses a method and apparatus for network interface card load balancing and port aggregation, comprising the following features:

Regarding claim 3, further comprising a graphical user interface (fig. 5B, GUI 520) for configuring the commands (col. 8, lines 5-10, GUI configuration panel).

Regarding claim 17, the step of using a graphical user interface (fig. 5B, GUI 520) to configure the commands (col. 8, lines 5-10, GUI configuration panel).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Klotzbach et al by using the features, as taught by Latif et al, in order to provide increased throughput (Latif et al, col. 2, lines 42-43).

9. Claims 4 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Klotzbach et al in view of Coile et al (U.S. Patent No. 6,108, 300).

Klotzbach et al describes the claimed limitations as discussed in paragraph 6 above. Klotzbach et al further discloses the following features:

Regarding claims 4 and 18, a control station (fig. 2B, remote host 17) and a remote device (fig. 1, T-carrier interface).

Klotzbach et al does not disclose the following features:

Regarding claim 4, further comprising a client computer program for initiating communications.

Regarding claim 18, further comprising the step of using a client computer program to initiate communications.

Coile et al discloses a method and apparatus for transparently providing a failover network device, comprising the following features:

Regarding claim 4, further comprising a client computer program for initiating communications (col. 1, lines 44-45, service client requests).

Regarding claim 18, further comprising the step of using a client computer program to initiate communications (col. 1, lines 44-45, service client requests).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Klotzbach et al by using the features, as taught by Coile et al, in order to provide failover for a network device (Coile et al, col. 3, lines 66-67), increasing reliability.

10. Claims 5 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Klotzbach et al in view of Coile et al as applied to claims 4 and 18 above respectively, and further in view of Minami et al (U.S. Patent No. 6,034,963).

Klotzbach et al describes the claimed limitations as discussed in paragraph 6 above. Klotzbach et al and Coile et al do not disclose the following features:

Regarding claims 5 and 19, wherein the client computer program further comprises an e-mail program.

Minami et al discloses a multiple network protocol encoder/decoder and data processor, comprising the following features:

Regarding claims 5 and 19, wherein the client computer program further comprises an e-mail program (col. 7, lines 21-22, email client code).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Klotzbach et al and Coile et al by using the features,

as taught by Minami et al, in order to provide reduced system memory and form factor requirements (Minami et al, col. 2, lines 32-34).

11. Claims 7-8 and 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Klotzbach et al in view of Harrison et al (U.S. Patent No. 5,961,626).

Klotzbach et al describes the claimed limitations as discussed in paragraph 6 above. Klotzbach et al does not disclose the following features:

Regarding claims 7 and 15, wherein communications between the control station and the remote device are accomplished by means of a secure communications path.

Regarding claim 8, wherein at least one of the control station signals and remote device signals are encrypted prior to transmission and then decrypted after reception.

Regarding claim 22, further comprising the steps of encrypting at least one of the control station signals and remote device signals prior to transmission, and then decrypting at least one of the control station signals and remote device signals after reception.

Harrison et al discloses a method and processing interface for transferring data between host systems and a packetized processing system, comprising the following features:

Regarding claims 7 and 21, wherein communications between the control station and the remote device are accomplished by means of a secure communications path (col. 4, lines 19-20, secure communications and signaling).

Regarding claim 8, wherein at least one of the control station signals and remote device signals are encrypted prior to transmission (fig. 1, cipher text interface processor 15 and associated bi-directional link to programmable crypto processor 17) and then decrypted after reception (fig. 1, cipher text interface processor 15 and associated bi-directional link to programmable crypto processor 17).

Regarding claim 22, further comprising the steps of encrypting at least one of the control station signals and remote device signals prior to transmission (fig. 1, cipher text interface processor 15 and associated bi-directional link to programmable crypto processor 17), and then decrypting at least one of the control station signals and remote device signals after reception (fig. 1, cipher text interface processor 15 and associated bi-directional link to programmable crypto processor 17).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Klotzbach et al by using the features, as taught by Harrison et al, in order to provide secure data exchanges (Harrison et al, col. 2, line 48), enhancing security.

12. Claims 9 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Klotzbach et al in view of Beckwith (U.S. Patent Application Publication No. 2002/0090001 A1).

Klotzbach et al describes the claimed limitations as discussed in paragraph 6 above. Klotzbach et al does not disclose the following features:

Regarding claims 9 and 23, wherein the control station and remote device comprise a SCADA system.

Beckwith discloses a wireless communications hub with protocol conversion, comprising the following features:

Regarding claims 9 and 23, wherein the control station and remote device comprise a SCADA system (fig. 2, SCADA processor 30).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Klotzbach et al by using the features, as taught by Beckwith, in order to provide freedom for level one devices to perform their basic functions rapidly and accurately (Beckwith, par. 0008, lines 8-10), improving performance.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kasparian et al (U.S. Patent No. 5,007,050) discloses a bidirectional digital serial interface for communication digital signals including digitized audio between microprocessor-based control and transceiver units of two-way radio communications equipment. Jeong (U.S. Patent No. 5,675,584) discloses a high speed serial link for fully duplexed data communication. Shimoda (U.S. Patent No. 5,574,553) discloses a packet conversion apparatus and system.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nick Deichmeister whose telephone number is (571)

272-9746. The examiner can normally be reached on Monday through Friday (off alternate Fridays).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kwang Yao can be reached on (571) 272-3182. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

NFD

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